

WHAT IS CLAIMED IS:

1. A motor driving apparatus in which excitation current is supplied to windings of plural phases of a stepping motor and said stepping motor is rotatingly  
5 driven by successively switching the exciting phases, comprising:

means for exciting a predetermined phase winding among the plural phases of said stepping motor for a predetermined time period, when a power supply of the  
10 apparatus is turned ON;

means for judging whether there is the possibility of deviating a positional relationship between a rotor and a stator of said motor from a positional relationship determined by the excitation of the  
15 predetermined phase winding for the predetermined time period, by an external force, before a rotation of said motor is started; and

control means for exciting the predetermined phase winding among the plural phases of said stepping motor  
20 again for a predetermined time period, if the possibility of deviation is judged.

2. A motor driving apparatus according to claim 1, wherein said stepping motor rotates a roller for  
25 conveying a recording sheet in an image forming apparatus.

3. A method for controlling a motor driving apparatus in which excitation current is supplied to windings of plural phases of a stepping motor and said stepping motor is rotatably driven by successively switching the exciting phases, comprising the steps of:

exciting a predetermined phase winding among the plural phases of said stepping motor for a predetermined time period, when a power supply of the apparatus is turned ON;

judging whether there is the possibility of deviating a positional relationship between a rotor and a stator of said motor from a positional relationship determined by the excitation of the predetermined phase winding for the predetermined time period, by an external force, before a rotation of said motor is started; and

controlling to excite the predetermined phase winding among the plural phases of said stepping motor again for a predetermined time period, if the possibility of deviation is judged.

4. Control program for a motor driving apparatus in which excitation current is supplied to windings of plural phases of a stepping motor and said stepping motor is rotatably driven by successively switching the exciting phases, comprising the steps of:

exciting a predetermined phase winding among the

plural phases of said stepping motor for a predetermined time period, when a power supply of the apparatus is turned ON;

judging whether there is the possibility of  
5 deviating a positional relationship between a rotor and a stator of said motor from a positional relationship determined by the excitation of the predetermined phase winding for the predetermined time period, by an external force, before a rotation of said motor is  
10 started; and

controlling to excite the predetermined phase winding among the plural phases of said stepping motor again for a predetermined time period, if the possibility of deviation is judged.

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5. A storage medium readable by a computer storing control program for a motor driving apparatus in which excitation current is supplied to windings of plural phases of a stepping motor and said stepping  
20 motor is rotatingly driven by successively switching the exciting phases, comprising:

means for exciting a predetermined phase winding among the plural phases of said stepping motor for a predetermined time period, when a power supply of the  
25 apparatus is turned ON;

means for judging whether there is the possibility of deviating a positional relationship between a rotor

and a stator of said motor from a positional  
relationship determined by the excitation of the  
predetermined phase winding for the predetermined time  
period, by an external force, before a rotation of said  
5 motor is started; and

control means for exciting the predetermined phase  
winding the plural phases of said stepping motor again  
for a predetermined time period, if the possibility of  
deviation is judged.

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6. An image forming apparatus comprising:

means for forming an image on a recording sheet;

means using a stepping motor as a driving source  
and adapted to convey the recording sheet;

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driving means in which excitation current is  
supplied to windings of plural phases of said stepping  
motor and said stepping motor is rotatingly driven by  
successively switching the exciting phases;

means for exciting a predetermined phase winding  
20 among the plural phases of said stepping motor for a  
predetermined time period, when a power supply of the  
apparatus is turned ON;

means for judging whether there is the possibility  
of deviating a positional relationship between a rotor  
25 and a stator of said motor from a positional  
relationship determined by the excitation of the  
predetermined phase winding for the predetermined time

period, by an external force, before a rotation of said motor is started; and

control means for exciting the predetermined phase winding among the plural phases of said stepping motor again for a predetermined time period, if the possibility of deviation is judged.

7. An image forming apparatus according to claim 6, further comprising an opening/closing door attached to a main body of said image forming apparatus and opened for recording sheet jam treatment; and

detecting means for detecting whether said door is opened or not, and wherein

said control means of said driving means judges whether there is the possibility that the positional relationship between said rotor and said stator is deviated by the external force, on the basis of the fact whether the opening of said door is detected by said detecting means before the driving of said stepping motor is started.

8. A motor driving apparatus in which exciting electrical current is supplied to windings of plural phases of a stepping motor and said stepping motor is rotatingly driven by successively switching the exciting phases, wherein

when a power supply of the apparatus is turned ON,

a predetermined phase winding among the plural phases of said stepping motor is excited for a predetermined time period.

- 5           9. A method for controlling a motor driving apparatus in which exciting electrical current is supplied to windings of plural phases of a stepping motor and said stepping motor is rotatingly driven by successively switching the exciting phases, wherein
- 10           only exciting for a predetermined time period is effected.